



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/585,315	07/03/2007	Jun Hirano	L8638.06111	2336
52989	7590	03/17/2010		
Dickinson Wright PLLC James E. Ledbetter, Esq. International Square 1875 Eye Street, N.W., Suite 1200 Washington, DC 20006				
EXAMINER				
WYCHE, MYRON				
ART UNIT		PAPER NUMBER		
2617				
MAIL DATE		DELIVERY MODE		
03/17/2010		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/585,315

Applicant(s)

HIRANO ET AL.

Examiner

MYRON WYCHE

Art Unit

2617

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 July 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 29-44 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 29-44 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on _____ is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/CD)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date 7/6/06 & 7/3/07

DETAILED ACTION

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file. In particular, certified copies of the non-English, Japanese Patent Application No. 2004-002473 have been placed in the file. However, a certified English language translation, as discussed in 35 USC 119(b) (3), has not been provided for either of these applications.

Should applicant desire to obtain the benefit of foreign priority under 35 U.S.C. 119(a)-(d) prior to declaration of an interference, a certified English translation of the foreign application(s) must be submitted in reply to this action. 35 USC 119(b)(3), 37 CFR 41.154(b) and 41.202(e). Failure to provide a certified translation may result in no benefit being accorded for the non-English (i.e., Japanese) application referenced above.

Information Disclosure Statement

The information disclosure statements (IDS) submitted on 7/6/06 and 7/3/07 are in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim 30 is rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent Application Publication No. 20030103496 ([Lakshmi Narayanan et al.](#)).

With respect to claim 30, [Lakshmi Narayanan et al.](#) discloses: “a first access router belonging to a first subnet (**FIG. 1: 101, AS1110; [0033]: “access router”, “autonomous system”**), and a second access router belonging to a second subnet different from said first subnet (**FIG. 1: 101, AS1110; [0033]: “access router”, “autonomous system”**), said first access router and said second access router being connected via IP network (**FIG. 1: AS1110, AS2120, Internet; [0012]: “Internet”, [0028]: “Internet protocol packets”**), and a mobile terminal is connected to said first subnet or said second subnet via radio communication” (**FIG. 1: 107, 127, 151; [0033]: “base station”, [0035]: “base station”**), and the mobile terminal connected to said first subnet requests a link local address of said second access router or of a default router in said second subnet to said second access router when transmitting a message V to notify connection to said second subnet immediately after executing the handover

to said second subnet, and acquires said link local address from said second access router" ([0035]: "link local address"; FIG. 3, [0071]-[0074]).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 29, 31-35 and 37-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lakshmi Narayanan et al. in view of U.S. Patent Application Publication No. 20030026241 (Ono et al.).

Regarding claim 29, Lakshmi Narayanan et al. discloses: "a first access router belonging to a first subnet (FIG. 1: 101, AS1110; [0033]: "access router", "autonomous system"), and a second access router belonging to a second subnet different from said first subnet (FIG. 1: 123, AS2120; [0033]: "access router", "autonomous system") , said first access router and said second access router being connected via IP network" (FIG. 1: AS1110, AS2120, Internet; [0012]: "Internet"; [0028]: "Internet protocol packets"), "a mobile terminal is connected to said first subnet or said second subnet via radio communication" (FIG. 1: 107, 127, 151; [0033]: "base station", [0035]: "base station"); "the mobile terminal connected to said first subnet requests a link local address of said second access router or of a default router in said second subnet to said second access router immediately after executing the

handover to said second subnet, acquires said link local address from said second access router ([0035]: "link local address"; FIG. 3, [0071]-[0074]).

In the same field of endeavor (i.e., mobile IP networks), Ono et al. discloses a mobile terminal ([0146]: "MN"; FIG. 63, [0573]: "MN") that: "refers to said link local address (FIG. 17, [0264]: "link local address") when transmitting packet to outside (FIG. 63, [0573]: "CN") of said second subnet after acquiring said link local address from said second access router" ([0146]: "VCOA"; FIG. 61, [0570]). It is respectfully submitted that it would have been obvious to one of ordinary skill in the art at the time of the invention to combine Lakshmi Narayanan et al. with Ono et al. in order to explicitly disclose: "when transmitting packets outside of said second subnet" (e.g., to the corresponding node (CN) of Ono et al. in FIG. 61), as recited in claim 29, in order to achieve: " achieves high-speed handover and route optimization free from a limitation to a packet transfer route in a packet communication system" (see **ABSTRACT** of Ono et al.).

Regarding claim 31, Ono et al. discloses: "wherein said mobile terminal is so arranged that information to request of said link local address is added within said message V", and "said second access router is so arranged that an RA message including said link local address is transmitted to said mobile terminal" (FIG. 17, [0264]: "router advertisement").

With respect to claim 32, Ono et al. discloses: "wherein said mobile terminal is so arranged that information to request said link local address different from said message V is transmitted to said second access router, and said second access router is so

arranged that an RA message including said link local address is transmitted to said mobile terminal" (FIG. 17, [0264]: "router advertisement").

Regarding claim 33, Lakshmi Narayanan et al. discloses: "a first access router belonging to a first subnet (FIG. 1: 101, AS1110; [0033]: "access router", "autonomous system"), and a second access router belonging to a second subnet different from said first subnet (FIG. 1: 123, AS2120; [0033]: "access router", "autonomous system"), said first access router and said second access router being connected via IP network" (FIG. 1: AS1110, AS2120, Internet; [0012]: "Internet"; [0028]: "Internet protocol packets"), and "a mobile terminal is connected to said first subnet or said second subnet via radio communication" (FIG. 1: 107, 127, 151; [0033]: "base station", [0035]: "base station"); and "the mobile terminal connected to said first subnet requests a link local address of a second access router or of a default router in said second subnet to said second access router, and acquires said link local address from said second access router" ([0035]: "link local address"; FIG. 3, [0071]-[0074]).

Ono et al. discloses: "said second access router is arranged to transmit an RA message including said link local address when receiving a message V to notify connection to said second subnet from said mobile terminal" (FIG. 17, [0264]: "router advertisement").

Regarding claim 34, Lakshmi Narayanan et al. discloses: "a first access router belonging to a first subnet (FIG. 1: 101, AS1110; [0033]: "access router", "autonomous system"), and a second access router belonging to a second subnet

different from said first subnet (FIG. 1: 123, AS2120; [0033]: "access router", "autonomous system"), said first access router and said second access router being connected via IP network" (FIG. 1: AS1110, AS2120, Internet; [0012]: "Internet"; [0028]: "Internet protocol packets"), and "a mobile terminal is connected to said first subnet or said second subnet via radio communication" (FIG. 1: 107, 127, 151; [0033]: "base station", [0035]: "base station"), and "the mobile terminal connected to said first subnet requests a link local address to an arbitrary router belonging to said second subnet immediately after executing the handover to said second subnet, acquires said link local address from said arbitrary router ([0035]: "link local address"; FIG. 3, [0071]-[0074]).

Moreover, Lakshmi Narayanan et al. discloses:

[0036] An embodiment includes steps. The first step is the access router selection process where policy servers compute a list of possible access routers that may serve the MN 151 and the MN 151 is informed of this list by the policy server in its own domain. The second step involves the actual context transfer. Details of the two steps are described in the following subsections.

That is, it is respectfully submitted that the above recited: "compute a list of possible access routers" meets the limitation of : "identifies a default router in said second subnet", as recited in the claim.

With respect to claim 34, Ono et al. further discloses: "refers to a link local address of said default router when transmitting packet to outside (FIG. 63, [0573]: "CN") of said second subnet after identifying said default router" (FIG. 17, [0264]: "link local address").

With respect to claim 35, Ono et al. discloses: “wherein said mobile terminal is arranged to request said link local address to said arbitrary router when transmitting a message V to notify connection to said second subnet” (FIG. 17, [0264]: “**router advertisement**”).

With respect to claim 37, Lakshmi Narayanan et al. discloses: “a first access router belonging to a first subnet (FIG. 1: 101, AS1110; [0033]: “**access router**”, “**autonomous system**”), and a second access router belonging to a second subnet different from said first subnet (FIG. 1: 123, AS2120; [0033]: “**access router**”, “**autonomous system**”), said first access router and said second access router being connected via IP network” (FIG. 1: AS1110, AS2120, Internet; [0012]: “**Internet**”; [0028]: “**Internet protocol packets**”), and “a mobile terminal is connected to said first subnet or said second subnet via radio communication (FIG. 1: 107, 127, 151; [0033]: “**base station**”, [0035]: “**base station**”), and “means for requesting a link local address of said second access router or of a default router in said second subnet to said second access router immediately after executing the handover from said first subnet to said second subnet”; and “means for receiving said link local address from said second access router” (FIG. 3; [0071]-[0074]; “**base station**”, [0035]: “**link local address**”).

Ono et al. discloses: “means for referring to said link local address when transmitting packet to outside of said second subnet after acquiring said link local address from said second access router” (FIG. 17, [0264]: “**router advertisement**”).

Regarding claim 38, Lakshmi Narayanan et al. discloses: “a first access router belonging to a first subnet (FIG. 1: 101, AS1110; [0033]: “**access router**”,

“autonomous system”), and a second access router belonging to a second subnet different from said first subnet (FIG. 1: 123, AS2120; [0033]: “access router”, “autonomous system”), said first access router and said second access router being connected via IP network” (FIG. 1: AS1110, AS2120, Internet; [0012]: “Internet”; [0028]: “Internet protocol packets”), and “a mobile terminal is connected to said first subnet or said second subnet via radio communication” (FIG. 1: 107, 127, 151; [0033]: “base station”, [0035]: “base station”), wherein there are provided:

Ono et al. discloses: “means for requesting a link local address of said second access router or of a default router in said second subnet to said second access router when transmitting a message V to notify connection to said second subnet immediately after executing the handover from said first subnet to said second subnet”; “means for receiving said link local address from said second access router”; “means for adding information to instruct a request of said link local address in said message V”; “means for receiving an RA message including said link local address from said second access router”; and “means for extracting said link local address from said RA message” (FIG. 2, FIG. 3, FIG. 17, [0264]: “router advertisement”).

With respect to claim 39, Lakshmi Narayanan et al. discloses: “a first access router belonging to a first subnet (FIG. 1: 101, AS1110; [0033]: “access router”, “autonomous system”), and a second access router belonging to a second subnet different from said first subnet (FIG. 1: 123, AS2120; [0033]: “access router”, “autonomous system”), said first access router and said second access router being connected via IP network” (FIG. 1: AS1110, AS2120, Internet; [0012]: “Internet”;

[0028]: “Internet protocol packets”), and “a mobile terminal is connected to said first subnet or said second subnet via radio communication (**FIG. 1: 107, 127, 151; [0033]: “base station”, [0035]: “base station”**)).

Ono et al. discloses: “means for requesting a link local address to an arbitrary router belonging to said second subnet immediately after executing handover from said first subnet to said second subnet”; and “means for receiving said link local address from said arbitrary router and for identifying a default router in said second subnet from said arbitrary router” (**FIG. 2, [0228]-[0230]; FIG. 3, FIG. 17, [0264]: “router advertisement”**).

Regarding claim 40, as discussed above, Lakshmi Narayanan et al. suggests the “default router.” Ono et al. discloses: “wherein there is provided means for referring to a link local address of said default router when packet is transmitted to outside of said second subnet after said default router has been identified” (**FIG. 2, [0228]-[0230]; FIG. 3, FIG. 17, [0264]: “router advertisement”**).

With respect to claim 41, as discussed above, Lakshmi Narayanan et al. suggests the “default/arbitrary router.” Ono et al. discloses: “wherein there is provided means for requesting said link local address to said arbitrary router when transmitting a message V to notify connection to said second subnet” (**FIG. 2, [0228]-[0230]; FIG. 3, FIG. 17, [0264]: “router advertisement”**).

Regarding claim 42, as discussed above, Lakshmi Narayanan et al. suggests the “default/arbitrary router.” Ono et al. discloses: “wherein there is provided means for requesting said link local address to said arbitrary router when transmitting a message

V to notify connection to said second subnet" (FIG. 2, [0228]-[0230]; FIG. 3, FIG. 17, [0264]: "router advertisement").

With respect to claim 45, discloses: "an access router in a communication system, being a second access router belonging to a second subnet different from a first subnet (FIG. 1: 123, AS2120; [0033]: "access router", "autonomous system"), to which a first access router belongs (FIG. 1: 101, AS1101; [0033]: "access router", "autonomous system"), said access router being connected to said first access router via IP network (FIG. 1: AS1110, AS2120, Internet; [0012]: "Internet"; [0028]: "Internet protocol packets") and can be connected to a mobile terminal via radio communication (FIG. 1: 107, 127, 151; [0033]: "base station", [0035]: "base station").

As discussed above, Ono et al. discloses: "means for receiving information to request said link local address added in said message V as a request of a link local address of said second access router or of a default router in said second subnet from said mobile terminal when receiving a message V to notify connection to said second subnet from said mobile terminal immediately after executing the handover from said first subnet to said second subnet"; "means for acquiring said link local address"; "means for providing said link local address to said mobile terminal"; and "means for transmitting an RA message including said link local address to said mobile terminal when receiving said message V added with information to request said link local address from said mobile terminal" (FIG. 2, [0228]-[0230]; FIG. 3, [0245]-[0248]; FIG. 17, [0264]: "router advertisement").

Claims 36, 43 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lakshmi Narayanan et al. in view of Ono et al. and U.S. Patent Application Publication No. 20040156347 (Kim).

Claim 36 is ultimately dependent upon claim 34. As discussed above, claim 34 is ultimately disclosed by Lakshmi Narayanan et al. and Ono et al. Thus, Lakshmi Narayanan et al. in view of Ono et al. also disclose those portions of claim 34 that are also recited in claim 36.

In addition, Ono et al. discloses: "at least one of said message V or said message V added with information to instruct a request of said link local address or information to request said link local address different from said message V in said second subnet", and "said default router in said second subnet transmits an RA message to said mobile terminal" (**FIG. 17, [0264]: "router advertisement"**) and Lakshmi Narayanan et al. suggest the "default router" (**[0036]**).

Further, regarding claim 36, in the same field of endeavor (i.e., mobile IP networks), Kim discloses: "said mobile terminal multi-casts" and "information transmitted by said multi-cast" (**FIG. 3, [0043]: "multicasts a DIT information requesting message"**). It is respectfully submitted that it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combination of Lakshmi Narayanan et al. and Ono et al. with in order to explicitly disclose: "multicast" transmissions of Kim, in order to achieve: " achieves high-speed handover and route optimization free from a limitation to a packet transfer route in a packet communication

system" (see **ABSTRACT** of Ono et al).

With respect to claim 43, Ono et al. discloses: "at least one of said message V or said message V added with information to request said link local address or information to request said link local address different from said message V in said second subnet"; and "means for receiving an RA message transmitted by said default router in said second subnet as a response (**FIG. 2, [0228]-[0230]; FIG. 3, FIG. 17, [0264]: "router advertisement"**)".

Kim, as discussed above, discloses: "means for multi-casting". to said multi-casting" (**FIG. 3, [0043]: "multicasts a DIT information requesting message"**). .

Regarding claim 44, Ono et al. discloses: "means for multi-casting at least one of said message V or said message V added with information to request said link local address or information to request said link local address different from said message V in said second subnet"; and "means for receiving an RA message transmitted by said default router in said second subnet as a response" (**FIG. 2, [0228]-[0230]; FIG. 3, FIG. 17, [0264]: "router advertisement"**).

Kim, as discussed above, discloses: "means for multi-casting". to said multi-casting" (**FIG. 3, [0043]: "multicasts a DIT information requesting message"**).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US 2002/0154638 discloses a Method and System for a Low-Overhead Mobility Management Protocol in the internet Protocol. Layer".

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MYRON WYCHE whose telephone number is 571-272-3390. The examiner can normally be reached on Monday-Friday, 8 a.m. to 5 p.m. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dwayne Bost can be reached on 571-272-7023. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Dwayne D. Bost/
Supervisory Patent Examiner,
Art Unit 2617

/Myron Wyche/
AU 2617
March 13, 2010